









## UMIST principal proposes alternative pruning plan

by Ngaio Crequer  
A seven point plan, including a quota system for overseas students, and a lower retirement age for academic staff are suggestions made by Professor Robert Haszeldine, principal of the University of Manchester Institute of Science and Technology as a means of cutting down university spending.

Professor Haszeldine told a meeting of the court of governors that the Government's proposed method of making economies was "like trying to prune a cactus with a crowbar... on ill thought out cut of 30 per cent would kill (the cactus), especially if the crowbar sliced through the bulb as well as the stem."

Although UMIST was not trying to dodge its share of the economics there were limits as to how far outside income could be increased and what savings could be made on equipment and materials.

He said that the universities should seek, and the Government provide opportunity for more detailed discussion between them and the University Grants Committee, to reduce expenditure but without crippling or destroying the university system in the process.

He put forward seven suggestions as a basis for such discussions. First, the introduction of a quota system for overseas students. "The cost for overseas students in the university worthy of the name is clean—but at what level? I suggest 10 per cent of the student population. The quota system works well in other parts of the world—it can for Britain."

Secondly, an enhanced bursary system for able overseas post-graduates. The scheme already proposed is too small, he says, and numbers could be increased by using funds currently earmarked for overseas aid.

There could be a change in the fee structure to recognize the vital difference between fixed costs and marginal or run on costs. Fixed costs at UMIST amount to 85 per cent of the total, and these costs would in essence remain unchanged if we had only half the number of students we now have."

Bright students in colleges of further and higher education are being neglected by the careers service in favour of their less able academic counterparts, says the Department of Employment's careers service branch review.

The report is the first to survey the activities of the careers service in England since the Employment and Training Act 1973 which created new mandatory duties on local education authorities and new relationships between local and central government in the financing of the service.

It identifies that the dramatic rise in youth unemployment from 1974 has meant that in several authorities the careers service has found it imperative to direct their energies towards these youngsters at the expense of their normal work. As a result inadequate guidance was given to the brighter students who consequently were not applying for jobs which they might have been able to secure.

In addition the review found a provision made in the RSG between settlements in 1974/75 and 1979/80 for careers service work in further and higher education meant that although the number of vocational guidance interviews rose in percentage there was no corresponding change. Moreover, it concluded the development of other types of careers work in the colleges.

Speaking about the report, Lord Gower, Minister of State at the Department of Employment said: "It is clear that the careers service has to be concerned with those of lower academic attainment rather than the most able. Now it is also doing the job by neglecting the high ability students who are being overlooked."

He added that the new career guidelines being prepared by the careers service branch for the local



Professor Haszeldine: I like trying to prune a cactus with a crowbar.

Another suggestion is that the retirement age for university staff could be reduced from 67 to 62. More than 60 per cent of UMIST's academic staff were aged 40 or more, and the number of academic staff in the 26-30 age bracket had dropped by one third. Industry had changed its attitude to retirement and so could the universities.

"The appointment of young academic staff is vital for a healthy university system, and in a tough steady state situation new thoughts, new norms and values are needed," he said.

Three more changes are proposed: the increased pooling and sharing of resources by universities, including rationalization of courses, an improvement in the collaboration between universities and industry, and the establishment of acceptable methods for effective changes in universities and by them in keeping with the speed of changes needed in the rest of the community.

Professor Haszeldine also pointed to a number of other problems in the universities, that if outlined, our

moulded or dented equipment. "We continue to live on borrowed time in this respect; the problem gets larger, not less, and insidiously the British universities become steadily less able to hold their own on an international basis, and the education and training provided for our young scientists and technologists steadily decreases in quality," he says.

Added to this is the problem of ageing buildings. He says that 25 per cent of UMIST's buildings were built more than 70 years ago and a further 25 per cent is pre-war in style. It all amounted to a shortage of resources for higher education and for scientific and technological education in general.

"My belief is that UMIST, like other universities, has, at all levels, to face up to further cutbacks, the closing of courses, the closing down of sections of departments, the concentration of some courses within UMIST. Instead of within other universities, and conversely the loss of other courses which will best be concentrated in other universities."

Professor Haszeldine said that the decision to change full cost fees to overseas students was a major setback which, given a certain set of circumstances, could prove disastrous for the university. "The Government's recent proposal... has plunged us into an Alice in Wonderland world where old values disappear and incongruous situations arise." The best estimate was that numbers would decrease by at least 30 to 40 per cent.

A loss of 33 per cent of our overseas student numbers over three years could, in financial terms, be equated with the consequent need for UMIST to lose at least 10 per cent of its staff, and such an equation, in human as well as financial terms, of a possible, but by no means unlikely, outcome of the proposed policy.

He said that the Government should see the need to change its current proposals even though it may well do this until after October 1980, when the financial position becomes far rather than conjecture.

## Students fight course closure

by David Jobbins

Students intend to fight the closure of a full-time nursing degree course at Newcastle Polytechnic.

Approval for the BA degree—jointly validated by the General Nursing Council and the Council for National Academic Awards—expired on January 31. No students had been taken on to the course or the beginning of the 1979-80 academic year.

The polytechnic's director, Dr Loing Barden, blamed the national shortage of nurses with its right academic background and experience for the failure after nearly a year of efforts to recruit a course leader.

"Other polytechnics and universities are having similar problems in recruiting leaders for their nursing degrees," he said.

Miss Rosemary Briggs, education officer for the GNC, commented: "They know our terms and have been trying to reach them."

Discussions had been taking place between the GNC and the polytechnic about a number of organizational and staffing problems, but she declined to go into further detail.

Newcastle Polytechnic student union president, Mr Phil Thompson said they would be bringing pressure on the polytechnic to take steps to get the course re-started.

"If this does not happen there will be no nursing degree course between Edinburgh and Leeds—a catastrophic situation for health care in the north-east. The polytechnic will most regretfully accept the decision to close the course."

Dr Barden said: "The polytechnic is strongly committed to the provision of health and paramedical education for the northern region, but the closure of the course offered by the polytechnic will most regretfully accept the decision to close the course."

Approval was given for the course for five years in 1973 and extended for another five years, depending on some unspecified criteria.

In December the GNC wrote to Newcastle indicating that because of the failure to recruit a course leader, approval would be withdrawn—but the existing 56 students would be safeguarded.

The polytechnic failed to recruit despite national advertising and direct approaches to other centres of nursing education, according to Dr Barden.

In 1976 students organized an occupation in an attempt to stop the course being moved from the city centre precinct to Coomb Lane, the old Northern Counties College.

"We knew that if they moved the course it would eventually close," Mr Thompson said.

## Lecturers strike over FE cuts

Lecturers at South Trafford College came out this week in the first of a series of strikes in protest against proposed cuts of £136,000 in the further education budget.

More than 100 staff, members of the National Association of Teachers in Further and Higher Education, lobbied the meeting of Trafford Council where the cut which would involve the loss of 20 full-time GCE O level courses at both South and North Trafford colleges were being considered. It is also intended to reduce the provision of A level courses and restrict admission to students living in the Trafford area.

The committee has also recommended a reduction of 20 per cent through early retirement, redundancy and natural wastage. However there are now fairly clear indications that the council intend to make a number of savings independent of their agreement with NATFHE.

Mr Peter Dawson, general secretary of NATFHE, said: "The cuts, in an area with a selective secondary school system, coupled with the scrapping of major discretionary grants for students at the college, will have a devastating effect on opportunities for young people."

Many of these young people depended on the colleges to provide them with the qualifications and skills necessary to obtain jobs. Education and training were the components of plans for economic regeneration. These cuts would further lengthen the queue and further damage prospects of economic recovery.

## Advice for teachers of the handicapped

Ways of training for work with mentally handicapped people are set out in a new document published this week by the Central Council for Education and Training in Social Work.

Training for Work with Mentally Handicapped People shows the range of courses offered by the polytechnic will most regretfully accept the decision to close the course.

It illustrates some ways in which special emphasis can be given to such work and suggests ways in which this can be increased.

The document, which was prepared by a group of CCETSW staff, argues that much of the knowledge and skills required by staff to work effectively with mentally handicapped people is shared with other groups of clients.

## Learning how to learn

Adults without formal academic qualifications who are seeking a second chance can get a taste of university study by attending a new course at Glasgow University.

About 35 students are already halfway through the first "University Introduction to Study" for mature students' course which is being pioneered by the university's department of adult and continuing education.

The new course aims to introduce students to the nature of university study and help them to acquire study skills in individual subjects by teaching them how to write essays and take notes.

Each student chooses two subjects in humanities and social sciences and studies them two evenings a week during a 26-week period.

The level of study is similar to first year undergraduate work in a Scottish university.

Most students on the course will be applying to Glasgow University and although achievement in it will not automatically entitle them to a place, performance will be taken into account by the arts, divinity, law and social science faculties.

Simultaneously, the department is carrying out a study of the motivation and performance of full-time adult students in the Scottish higher education system, with particular reference to the universities.

The research is being supported by Strathclyde Regional Council, which has awarded the annual sum of £4,500 over three years.

NUPE plans workers' literacy course

Manual workers at London University who have language and literacy problems are to be released for two hours a week to go to classes.

## North American News

## CUT TAXES



Howard Jarvis (above) puts his latest initiative to the public.

## Gene research guidelines relaxed

The government has further relaxed the safety guidelines for recombinant DNA research in the United States. The federal agency responsible for regulating gene splicing experiments, the National Institutes of Health, has published new rules that greatly ease the restraints governing an estimated 80 per cent of current work in the field.

The new NIH regulations, which take effect immediately, allow scientists to perform almost any genetic engineering with weakened K12 strain of the bacterium E. coli, so long as their laboratory meets certain minimum standards. The PI containment level—the least stringent of four possible containment levels, and they can be met by any decent bacteriological laboratory.

Millions of E. coli bacteria live in the guts of every human being, but the K12 strain, which is used for about four fifths of all recombinant DNA work, is artificially disabled so that it cannot survive outside laboratory conditions. Most scientists now believe that the chances of the bacteria acquiring dangerous characteristics in the course of gene

splicing experiments and then passing them on to wild E. coli are exceedingly small.

Such fears, with the risk of an uncontrollable epidemic, prompted prominent molecular biologists to propose a moratorium on recombinant DNA experiments in 1976, but having learnt more about the technique most of them believe the danger was greatly exaggerated (see *THES*, December 21).

Under the new regulations, straightforward experiments with E. coli K12 will no longer have to be registered with the NIH but they will still have to register each experiment with their own institution's safety committee. NIH Director Donald Fredrickson rejected a recommendation by his recombinant DNA advisory committee that such experiments should be exempted totally from federal regulations.

"That would be moving too fast and would encourage those who believe there are significant risks involved."

More stringent safety regulations remain in force for genetic manipulation of bacteria other than E. coli K12, and the cloning of genes that

## Taxing time for California

from Clive Cookson  
This summer the Californian electorate will have an opportunity to vote itself a 50 per cent reduction in state income taxes, courtesy of Howard Jarvis.

Mr Jarvis, co-author of the new legendary Proposition 13, which cut local property taxes by two thirds in 1978 and deprived local authorities of \$7 billion annual revenues, easily collected 550,000 signatures to put his latest initiative, dubbed Jarvis II, on next June's ballot.

The state higher education system, the highest and best in the United States, is trembling before Mr Jarvis's latest tax axe, which would cut \$5 billion or 20 per cent from state revenues.

Although the effects of Proposition 13 on public services have so far been mild, particularly in relation to the dire warnings of its opponents during their unsuccessful campaign against it, Jarvis II is expected to have a far more serious impact.

For a start, the \$5 billion state budget surplus which was used in bail out local authorities after Proposition 13 has now disappeared. The loss of revenue if Jarvis II

passes will be translated directly into cuts in public services. Provisional estimates by state officials suggest that education might lose about \$1.7 billion next year.

Only the 106 community colleges, the lowest of the three tiers of public higher education in California, were locally funded and lost income directly because of Proposition 13. Their budgets were cut by about 15 per cent, and they lost 5 per cent of their full-time and 40 per cent of their part-time students last year.

However, the middle tier, the 19 institutions California State University and Colleges, and the highest level, the nine-campus University of California, suffered indirectly because the state shifted funds from them to other state agencies to help bail out the localities.

Last week, the governor, Jerry Brown, ordered the UC and CSUC to prepare new budgets for 1980-81 30 per cent below those already submitted—just in case.

The university administrators were outraged not only by the magnitude of the contingency cuts but also by the fact that they were given just a fortnight to come up with them.

## Cooperative schemes given new budget backing

Two years ago the administration tried to wind up its successful cooperative education programme, which supports the American version of what is known in Britain as sandwich courses. However, Congress refused to stop funding Cooperative Education as it is often called.

Since then administration has had a complete change of heart, and the Education Department budget is requesting \$25m for cooperative education in 1981, \$5 more than the year. The additional money would support 13 large demonstration projects "to develop college-wide commitment to cooperative education," the Education Department says.

The goal is to develop linkages between institutions of higher education and a variety of employers in business, industry and public service in order to create long term commitments and resources for cooperative education.

The Department of Agriculture wants \$25m to fund competitive

research grants in 1981 (\$19m to study crop productivity and \$6m for human nutrition) compared to \$16m appropriated by a reluctant Congress in 1980.

The Agriculture Department also asked Congress to initiate a five-year programme to renovate and expand laboratories at the historically black land-grant colleges. Federal funding of \$25m would be matched by an equal contribution from the states.

The Education Department is asking for \$30m for international education (including foreign language) that is \$10m more than the 1980 appropriation, but it is far less than the huge investment in improving the United States' language skills and international knowledge which the president's commission studies recommended in November.

However, the commission's report may have come too late to have much impact on this budget.

## Professor resigns after theft outcry

James Allen, the well-known toxicologist, has resigned his professorship at the University of Wisconsin-Madison. He was convicted in October of stealing \$892 from his federal research grants to pay for private vacations (see *THES*, January 16).

Under an arrangement reached with Madison Chancellor Irving Sabin, the institution will take no disciplinary action against Dr Allen, in exchange for his agreeing to leave by June 30. He will use the time until then to complete ongoing research, make appropriate arrangements for the graduate students whose studies he is supervising, and try to transfer his research to another institution, said a university spokesman.

## Major effort to cut dropouts

Only four out of 10 American college freshmen graduate from the same institution within four years, the normal length of full-time undergraduate studies, according to a new policy brief on student retention by the American Council on Education.

Some of the remaining 60 per cent of students transfer to other institutions or eventually complete their studies, but three out of 10 probably never obtain a bachelor's degree, the brief says. College and universities are expected to make a major effort to cut their dropout rates, in order to offset some of the anticipated decline in enrolments.

## Stanford stamps out sixties liberalism

All across the United States colleges and universities are overhauling and tightening up their undergraduate curricula. In reaction to going research, make appropriate arrangements for the graduate students whose studies he is supervising, and try to transfer his research to another institution, said a university spokesman.

This Stanford faculty senate has voted to impose a new western culture requirement, and to require all students to take at least one course in each of seven other subject areas: literature and the fine arts, philosophical, social and religious thought, human development, behaviour and language, social processes and institutions, mathematics, sciences, natural sciences, technology and applied sciences.

Stanford President Richard Lyman compared current requirements to "a leaky sieve," saying students would have to try hard to avoid fulfilling them.

Faculty panels will be set up to decide which courses meet the new requirements. Only a few hundred courses are expected to be certified for this purpose, a Stanford spokesman said, producing a substantial



Students will have less time to relax with the new curriculum requirements.

faculty efforts to improve present courses, develop new sequences fulfilling more than one requirement, and try new curricular approaches.

The new western culture requirement has been developed by various committees over the past three years. Provost Donald Kennedy told the senate that faculty and students have responded very favourably to pilot programmes introduced this year. More than \$500,000 in gifts has already been raised to finance the change.

The new curriculum at Stanford is a dramatic liberalisation of the curriculum, including the abolition of the long-standing compulsory "western civilisation" course and a university-wide language requirement.

Agitation for stricter academic requirements, including a compulsory western culture programme started in the early 1970s, coincided with the year after the 1966-67 study of education at Stanford led to a dramatic liberalisation of the curriculum, including the abolition of the long-standing compulsory "western civilisation" course and a university-wide language requirement.

similar in intent to Harvard's much publicised "core curriculum" which is being introduced this year. But it is not quite such an ambitious undertaking.

Richard Lyman has announced his resignation as President of Stanford. He will leave in the summer to become president of the New York-based Rockefeller Foundation.

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Researchers are angry about a proposal to close the PRO's search rooms at Chancery Lane

## One for the archives—a record row

The suggestion that the Public Record Office is not normally an outlet for vehement sentiment. According to the PRO's deputy keeper Mr Ernest Denham, however, it is currently filled with inscriptions from eminent academics "cavilling down the wrath of heaven upon us".

The passions are inspired by the proposal to close the search rooms at Chancery Lane by 1982 after which time all researchers will have to go to the PRO's new repository at Kew. The Kew centre, which opened in 1977, has been described as the finest repository for modern archives in the world. Its facilities include computerized conveyor belts to handle documents and "bleepers" to summon archivists when their records are ready.

At present Kew handles 44 per cent of the PRO's total reader attendance, producing 1,800 documents a day, while Chancery Lane accounts for 26 per cent and produces 450 documents. The remaining 30 per cent comes from the Census records office near Chancery Lane whose fate has not yet been decided.

The documents at Chancery Lane include the Domesday Book; Pipe Rolls from the 12th century onwards; 16th, 17th and 18th century State Papers and Probate records down to 1857.

The present division of records is between modern departmental documents at Kew and medieval, state and legal papers at Chancery Lane. This is not completely clear cut and, for example, while eighteenth-century State Papers are at Chancery Lane, seventeenth-century Admiralty records are at Kew.

The main outcry against the proposals comes because, while as many documents as possible will be transferred to Kew, others will remain at Chancery Lane to be studied by, and from the Kew search rooms as required. Researchers say this will mean inconvenience and delay at Kew and will pose great risk of damage to irreplaceable documents in transit.

In a letter to *The Times* seven historians, including Professor T. C. Barker of the London School of

Economics and Professor F. M. L. Thompson of the University of London Institute of Historical Research, claimed that the proposals threatened "the greatest possible disservice to the unity and efficiency of research in our inter-related disciplines and (we) find it inconceivable that they should be implemented".

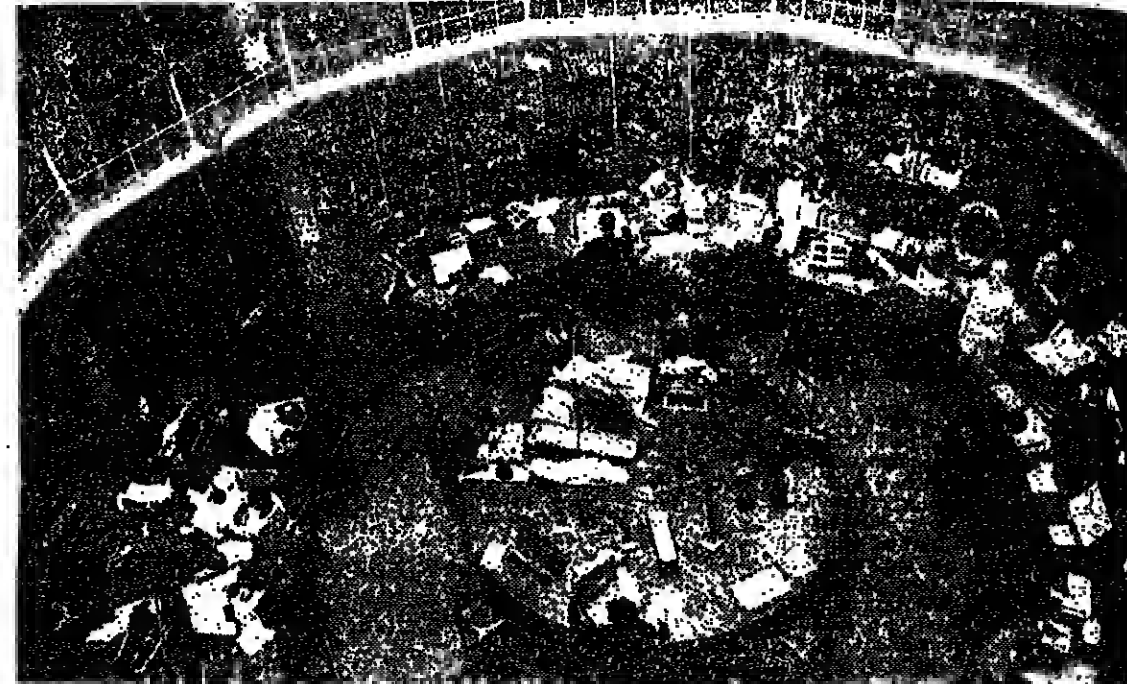
In a subsequent letter Mr Hugh Paskett, a genealogist, states the proposal to "subject fragile records to the serious hazards of a damaging 20-mile round trip in the jells of London traffic" was "hardly other than disgraceful".

The PRO is making the changes purely and simply in the name of economy. Last year it was asked by the Government to submit plans to cut 10, 15 and 20 per cent from its annual budget of £2m. In December the Government approved the 10 per cent plan and told the Office to implement it as soon as possible. The plan makes the Chancery Lane search rooms.

It was a choice between uprooting a few people for a short time or shoring the misery around "soil Mr Denham. "We did a survey and discovered that, excluding the commercial side of our operation which photocopies and sells documents, in theory at a profit, we were spending 40 per cent of our budget on the basic activity of safeguarding the records we have got out in monitoring and acquiring those currently being produced which we need."

This activity was felt to be so basic and central to the PRO's function that it could not be touched. Of the remaining 60 per cent of the budget, two-thirds went on running the search rooms and answering queries and the rest on miscellaneous areas including long-term repairs to bring damaged documents into public use.

"The opening of Kew meant a certain amount of duplication of work. We looked at the effect of eliminating this and found we could make most of the savings needed by producing the Chancery Lane records to the Kew search rooms." Details of the operation of the



The Chancery Lane research rooms

new system and exact timings have yet to be worked out. The Office plans to identify the most popular of the Chancery Lane documents and house these at Kew, keeping the numbers of documents to be shuttled to a minimum.

No one yet knows how long it will take to produce a document from Chancery Lane since it has been ordered at Kew but it is likely to be around 24 hours, although some officials are thinking in terms of twice daily delivery and therefore a same-day service.

The main argument, however, turns on the question of the safety of the documents. Researchers are worried about the dangers from traffic accidents and from continuing vandalism. "What they forget," says Mr Denham, "is that we have been transporting records for years on 30-mile journeys between Chancery Lane and our repository at Kew."

The other point is that some of these parchments are extremely rare and such stronger than many modern records, such as, for example, the wartime Foreign Office files, which are virtually

Mr Denham and his colleagues believe that some of the criticism is an emotional rather than rational grounds. Chancery Lane, while far from satisfactory in practical terms, has a friendly atmosphere and a long tradition and the firm is attributed to these factors.

Attempts are being made formally through the Public Records Advisory Council which represents users' interests and informally to change the plans. Mr Denham and PRO Keeper Mr Alfred Mabbs believe that the proposals are certain to go ahead and say there is not acceptable alternative means of making the savings while still complying with the PRO's statutory duties.

Several of Mr Mabbs' opponents have complained about the abruptness of the decision and the lack of consultation. They fear, for example, that the cost of transporting the documents will eat into much of the anticipated savings but say no figures have been produced and the Office has made no attempt to explain its reasoning.

Indeed the matter does seem to have been handled somewhat clumsily and with little grasp of the principles of sensible customer relations.

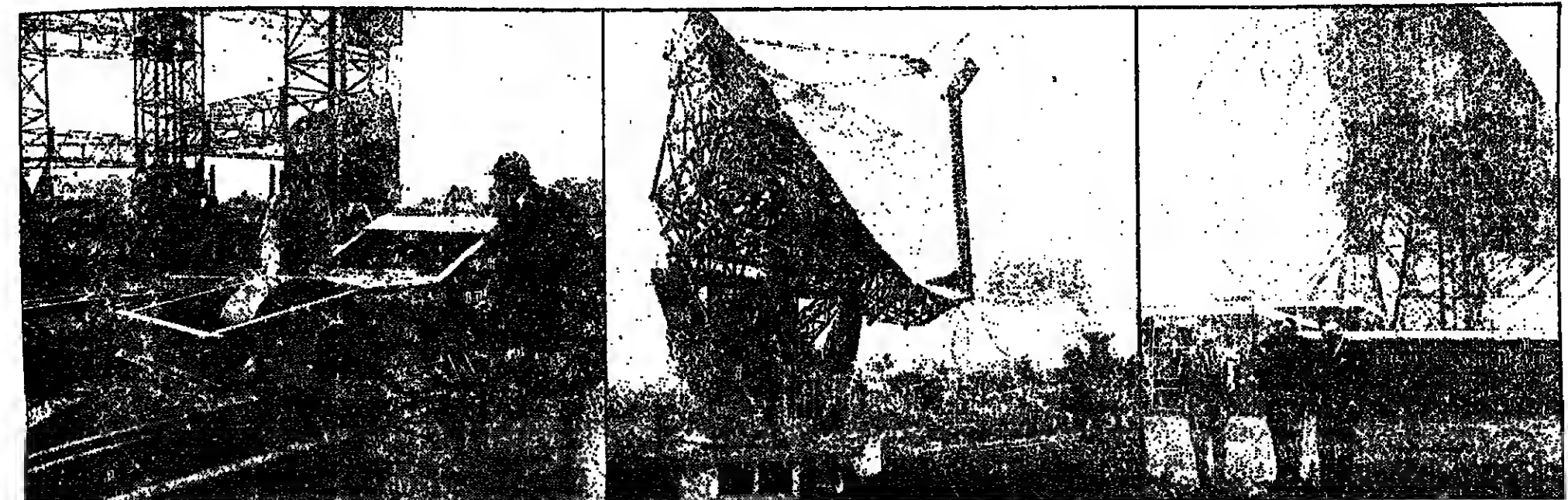
The Advisory Council was not consulted before the decision was made and the peremptory tone of its announcement on the Chancery Lane notice board seems to have added to the resentment.

"Perhaps we could have done things differently," Mr Denham said, "but I cannot see how. We were told of the Government's decision just before Christmas and we had to explain our plans to our staff as quickly as possible. There was not time for public debate."

"I am not saying that the situation is desirable but the alternatives are worse. There might be a period of general hell while the changes take place but I am convinced we shall soon see the light at the end of the tunnel."

"Many people will find Kew location and facilities more convenient than going to Central London. We have to think of the next generation of researchers as well as this one. I just wish the people would sit down and think about it calmly and give us credit for a little common sense."

Sandra Hemm



Early consultations at Jodrell... the main telescope (background) is complete... and the stylon is formally opened.

## Looking back through the telescope years

Sir Bernard Lovell talks to Science Correspondent Robin McKie about his pioneering work at Jodrell Bank

The giant metallic colossus of the new Jodrell Bank radio telescope forms a striking, and fitting, backdrop to any picture of Sir Bernard Lovell. More than any other scientist, his name will be forever linked with the project that was his brainchild—in this case, the massive 250-ft dish that looms over the Cheshire plain, and which still dominates world radio astronomy.

The huge 250-ft dish was Sir Bernard's project from its inception in 1949 to its completion in 1957. And since those fraught days of cash crises and bureaucratic wrangles, he has supervised 130,000 hours of research there, carried out at an unremitting 24 hours a day.

Of course, Jodrell Bank will always be remembered by the British public for its work as the then leading satellite tracking station in those heady days when the Russian Sputniks were unleashed upon an unsuspecting world. Only Sir Bernard's machine, pioneered through his personal drive, was capable of tracking both satellite and launcher.

It is then all the harder to envisage the telescope operating at night. Yet this will be the case when Sir Bernard, 66, retires as director of the bank to take over the Royal Greenwich Observatory.

Sir Bernard, the world's first professor of radioastronomy, will be retiring from what is now a public institution but which at the time of its construction was one of the most controversial scientific projects undertaken in Britain.

Following his wartime work using radar for blind bombing, Sir Bernard suggested that newly developed radio technology be used to explore the universe and proposed the construction of a giant steerable telescope at a cost of about £60,000.

Not surprisingly the Government was reluctant to fund such a project. It was not until 1946 that the Government agreed to fund the project. The cost of the telescope was £60,000, but the Government agreed to fund the project. The cost of the telescope was £60,000, but the Government agreed to fund the project.

A public appeal then had to be launched. The Shrewsbury and Hereford Mercury, a local newspaper, led the campaign to raise the money. The cost of the telescope was £60,000, but the Government agreed to fund the project.

And in the *Story of Jodrell Bank*, published by the bank, Sir Bernard describes the struggle and sudden ending to the project.

It is a story that is as bleak as the night sky. "I was told that the project was to be abandoned," he says. "I was told that the project was to be abandoned." The cost of the telescope was £60,000, but the Government agreed to fund the project.

It was "a fairytale ending to the years of anxiety and the depths of which were probably known to my family," Sir Bernard relates.

The experience of those days have left him with a bitter and unadvised view of this country's centralized control of science. And this antagonism was all the more unpleasantly reinforced when further prevarication caused the dropping of the new Mark V telescope for the Jodrell Bank complex.

"It could have been built for £4m to begin with but the Science Research Council would so long that by 1973, the costs had risen to £25m and eventually the project had to be killed off."

"The public accounts committee even congratulated the SRC for its attitude to the god! However, it was not really the council's fault. It must be the Department of Education and Science that takes the blame."

The real problem is not shortage of funds—budgets in effective terms are about 10-20 times greater than they were when work on Jodrell Bank began. It is the conglomeration of bureaucratic bodies, committees, and councils which he believes is throttling science.

"There is a great danger that science is now being channelled into areas which we think things can be done," Sir Bernard warned.

"No one is now prepared to take a risk. Jodrell Bank was an act of faith and we must accept that science is still a risk activity now."

"The amount of money you lose by taking a risk is always less than the amount of money you gain by not taking a risk."

Now Sir Bernard believes that the most important project that must be undertaken is the construction of a large optical telescope—such as the projected second Northern Hemisphere Observatory instrument which the SRC is desperately attempting to save in the face of recent government science budget cuts. This would then be used in cooperation with other radio astronomers.

"People forget that a large part of our work has been carried out through close collaboration between optical and radio observatories," he added. "As an example, Sir Bernard quoted the recent discovery at Jodrell Bank of a double quasar—in fact, a single quasar split into two halves by an intense gravitational field near by, a phenomenon only previously predicted by relativity theory. This observation was made in collaboration with optical astronomers."

But even in scientific areas outside his own, Sir Bernard is scathing about government policy. "For instance, our science policy in space is quite unbelievable. I am appalled by the reply, 'How much money will it cost to the telescope?'"

He is particularly indignant about poor investment in the Ariane rocket project which will give



Europe independence from the United States in putting satellites in space. "The French have provided a great deal of money for this one while we have only a 2 per cent investment. They are going to make a fortune while we get nothing."

It is not that Sir Bernard opposes cooperation in science. Far from it, but it should be carried out only from a position of strength.

"We run a big collaboration programme at Jodrell Bank but we are in a strong position in that work comes to us from the United States, Russia and Europe."

And if that implies a certain nationalistic pride in Sir Bernard's speech about his beloved telescope, you would not be far off the truth. The giant spidery filaments of the Jodrell Bank dish that fill the sky through his office window. "Not a ruddy foreign bolt in it!"

But if the telescope represents a major British monument it was one that the nation greatly appreciated. Sir Bernard's belief in the value of public opinion that he held the Jodrell Bank dish was a white elephant and only the launching of the Russian Sputniks in 1957 let Sir Bernard demonstrate the capabilities of his machine.

At that time, ground stations could record the "characteristic" "hiccup" of the Sputnik—but no one could detect the actual launchers. "I learnt with incredulity that, at least in the free world, not a single star had succeeded in launching the carrier rocket—and this was the rocket of a Russian intercontinental ballistic missile!" he recalls in *The Story of Jodrell Bank*.

In a few days, previously hostile press comments were transformed

into enclaves of joy when Sir Bernard cracked the code of the launcher of Sputnik 2 as it passed over the Arctic Circle at a distance of 1,500 kilometres.

Although his troubles were by no means over, the worst had passed and thanks to Lord Nuffield and his foundation, Britain got its radio telescope.

"Sputnik saved us completely, there is no doubt about that. My career in science would have ended there and Jodrell Bank would not have existed had it not been for the launching of the Russian satellites," he said.

Now his telescope is booked up for several months in advance and Jodrell Bank, which is run as part of Manchester University, takes about 10-20 PhD students a year.

"The quality of students is marvellous. There has been a sudden change in the past seven to eight years and now we are getting groups of very hard working, brilliant graduates."

This is reflected in student work in astronomy throughout the West. Sir Bernard believes—probably because it is so obviously one that involves discoveries that cannot harm.

Indeed, education takes on a greater importance at Jodrell Bank than might otherwise be expected at such a renowned site. Indeed, much of the operating of the Jodrell Bank telescope centres on the needs of postgraduate students and Sir Bernard is also particularly proud that up to half his students' labor fund work in industry.

And it is in this approach that Sir Bernard differs from that other great popular figure of British astronomy, Sir Fred Hoyle. While Sir Fred's career has been peppered with news of his latest revolution

any theories, Sir Bernard's cuttings file is remarkable for his reluctance to commit himself to any theoretical stance unless on firm ground.

Instead he will be remembered as the scientist whose force and valour set up a centre of instrumental excellence which has helped Britain maintain a strong position in the new well-established science of radioastronomy.

Not that he completely eschews theoretical speculation. In his recently published *The Centre of Immanence* (Hutchinson, £5.50), he has chosen to approach the investigation of the universe from an historical perspective.

It is a story which reveals just how fragile have been the conditions for the existence of intelligent life. Had there been only slight variations in certain physical laws after the cataclysmic Big Bang which heralded the birth of the universe as we know it, stars could not have formed, there would be little solid matter and definitely no human race.

"It seems that the chances of the existence of man on Earth today, or of intelligent life anywhere in the universe, are vanishingly small," he writes in the book.

In the universe as it is because it was necessary for the existence of man? Is there a false logic in the argument, or are the basic axioms of our mathematics and physics wrong?"

It is fascinating speculation, and certainly reassuring to know that Sir Bernard still retains "open-mindedness in the face of an unrelenting history of opposition to his work. Resolution of the questions he has raised will doubtless be determined by many of the generation of radio-astronomers he has trained throughout his career."

## Short answer to unemployment among the young

As unemployment, especially among school-leavers, creeps towards the dole-queue figure of two million, the need for watchdogs such as Youthaid to pressure the Government into action increases proportionately.

Last week Clare Short, its new director, appealed to Mr Jim Prior, the Secretary of State for Employment, not to seek further savings in public spending at the expense of the unemployed.

In a letter, he pointed out the dangers in the Government's complacency over the likely rise in unemployment estimated by the Manpower Services Commission—a general increase of 30 per cent and among school-leavers of 56 per cent by 1982. She hoped that the Youth Opportunities Programme would be expanded accordingly.

This week, Youthaid has made its response to the document *A Better Start to Working Life*, produced by the previous government, which recommended a £50m a year training programme for 200,000 school-leavers who go straight into employment without receiving further education or training.

Youthaid, which is now an established national research-based pressure group, is a mere baby, having been created in 1977 at the initiative of several youth organizations increasingly worried about the rising level of youth unemployment. They felt the need for a permanent base from which to bombard the Government, public and media with material on the vast scale of the problem.

Youthaid has already had a vital role in demanding improvements in YOP which led to a healthy debate on the shape of the programme.

Its retiring chairman, Mr Gerry Fowler, now deputy director of Poston Pottery, said only last month that the circumstances which led to Youthaid's establishment still existed and were even worse.



Clare Short: hopes for Parliament

Clare Short says that of all the aims the group has had since its inception, that of persuading policymakers to give high priority to the related problem of youth unemployment education and training, is the one they have come nearest to achieving.

When Youthaid came into existence the case of youth unemployment was not really in doubt, and it is in this area which we have had the greatest impact," she said.

"If you think of the very high unemployment rate of the YOP, the Special Temporary Employment Programme, there was no recognition of the scale of the problem. Now we have these programmes and every time the Secretary of State

for Education speaks he mentions the education and training of 16-19 year olds as a priority."

Since the election Youthaid has had a series of meetings with Ministers to draw their attention to the danger of cuts and to underspending the programme by concentrating on the cheapest element of YOP—Work Experience or Employers' Premises.

In July last year it organized a briefing conference in the House of Commons on the problems of youth unemployment, the purpose and value of YOP and the need for an improvement in education and training. Following the conference Youthaid launched a Parliamentary bulletin directed at MPs which aimed to summarize information on just such problems.

No doubt, Youthaid's independent status—it is a registered charity—helped in persuading the past and the present Government that young people deserved protection and special measures.

Not surprisingly though, one of the aims of the group has been unsuccessful with the Government. It is the development of measures for the creation of permanent employment.

"However, in Youthaid's annual report published only a few weeks ago discussing what to do about unemployment, Clare Short points out, an accusing finger at short-term solutions and said categorically that no long-term solution to the problem of rising youth unemployment was likely until we re-establish a commitment to full employment as a central objective of economic policy on the lines that Beveridge spelled out in 1944."

Although she supports YOP, she says no one should be under any illusion as to what it offers. Those who participate in it, she claims, pass and not treat young people who are involved as inadequate who

are unemployed as a result of personal failure, but as victims of a system that is failing them.

This kind of statement is an insight into the shift of direction that Youthaid is likely to take under its new director. Clare Short says that when she joined the group a decision was necessary as to whether Youthaid should be a research organization or whether it should rely on outside research and concentrate more on influencing policy makers.

Research played a great part in Youthaid's early life. Currently there are at least four projects being undertaken, one of the most interesting being the contribution that further education can make in areas of long-term unemployment. Findings already indicate that most further education colleges do not try to cater for themselves with the young unemployed.

Her priorities for the next year will be firmly policy-oriented. "One is aimed at the improvement in the quality of YOP, which is causing great concern because of its heavy concentration on WEP. The second is for a better structure and extension of training for 16- to 19 year olds."

On the long-term unemployed, Youthaid is planning a campaign to show the public that these people are victims of our society. They will seek to impress this on backbenchers and press the Government to re-examine the whole issue of cutting back STEP in education, to completely new campaign is planned to pressurize the Government not to cut unemployment benefits.

Both Clare Short's background and her experience are likely to aid her in realizing these ambitions. She joined the Home Office as a political graduate from Leeds University and established contact and worked for several MPs including the present Minister of State for Education, Mark Carstairs, to whom she was private secretary.

Much of her experience may be her own. Clare Short was a member of the Home Office from 1970-75 she worked on prison reform, civil law reform, housing and urban deprivation policy. It was the latter two areas which she was most involved in. She left the Home Office in 1975 to join Youthaid.

Indeed the matter does seem to have been handled somewhat clumsily and with little grasp of the principles of sensible customer relations.

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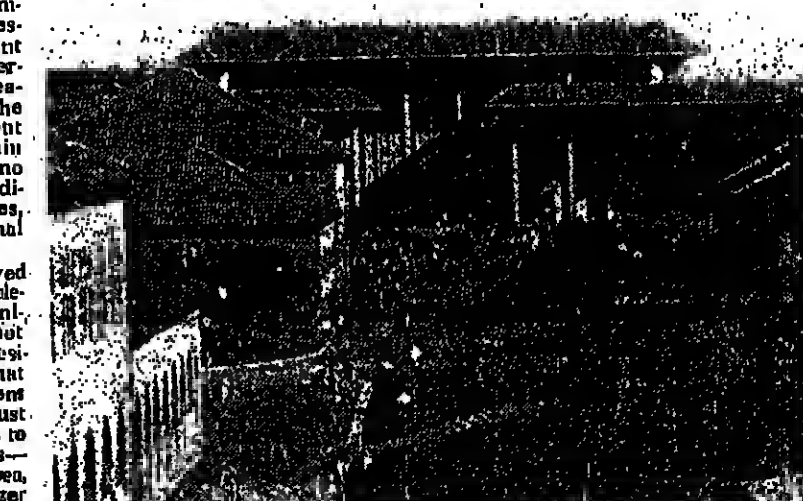
Indeed the matter does seem to have been handled somewhat clumsily and with little grasp of the principles of sensible customer relations.

Patricia Santinelli



# the Ivy League . . . and staying there

The author was formerly a lecturer in Russian studies at the University of St Andrews.



The author was formerly a lecturer in Russian studies at the University of St. Andrews.







# BOOKS

## Motives and public money











## BOOKS

## Russian imported labour

*Human Capital: the settlement of foreigners in Russia, 1762-1804*  
by Robert P. Bartlett  
Cambridge University Press, £19.00  
ISBN 0 521 22205 2

The great nineteenth-century historian Soloviev spoke more than once of the "perpetual evil of the Russian land, the physical lack of people". It is ironic that, at the time he was writing the trend had begun to reverse itself and during the second half of the nineteenth century Russians were more preoccupied with the increasing ratio of people to land. A hundred years earlier one can find countless laments in a vein similar to that of Soloviev.

Dr Bartlett quotes these laments again and again as a means of making intelligible the decision of the Imperial government to admit foreign settlers. Having done this, he discusses in detail the content of the two manifestos issued by Empress Catherine in 1762 and 1763 which expressed the intention of the regime and attempted to steady the procedures to be followed for the admission of foreigners. The remaining four chapters describe the operation of government policy and the pattern of immigration and settlement; with one chapter being devoted to foreign artists and entrepreneurs.

This is not a work of social history. One finds nothing on the background of the people who came to Russia, most of them from German states. Dr Bartlett also tells us little about their life, in their new home. Nor is this a work

of economic history; an economist might be astonished to see that although the author appropriates his title from economics, its relevance is nowhere made explicit. Dr Bartlett reproduces the opinions of contemporaries about the dearth of population without analysing their substance. The assertion of one writer that Russia could support a population 10 times its existing size is a curious level of technology? It passes without comment. The argument that immigration would improve Russian economic and military power is left in mid-air.

Instead *Human Capital* concerns itself with the formulation and execution of official policy as it applied to foreign colonists. The story is presented through the eyes of the bureaucracy and independent observers such as J. R. Forster. The picture that emerges is of a government keen to impress upon foreigners the advantages of settlement, such as abundant land and tax concessions. Those who swayed the propaganda moved to the empty spaces in the south-east Ukraine and Lower Volga.

The Government was subsequently hampered by the First World War and then ruthlessly uprooted by Stalin. To the Empress Catherine their chief advantage consisted in their willingness to live for a time in the wilderness in order to improve "habits and manners". This book is like that of the perfect to attract foreign settlers, appointing.

Peter Gatrell

Peter Gatrell lectures in economic history at Manchester University.

## Ventures in the brewing industry

*The Transformation of England: essays in the economic and social history of England in the eighteenth century*  
by Peter Mathias  
Methuen, £10.95 and £4.95  
ISBN 0 416 73110 and 73120 1

The danger of publishing "collected papers" in any area is that they will not cohere. A paper is a separate piece with its own justification, and by the time enough papers have been written to add up to a reasonably-sized volume the author's focus of activities has often shifted sufficiently to make coherence difficult. Professor Mathias, however, has confined his sphere of interest sufficiently to certain aspects of the economic history of England during the eighteenth century to produce a kind of coherence, but even though the subject matter of these essays is fairly rigidly economic and his illustrations drawn mainly from the history of a single industry (brewing), his first area of research, the range of the 16 papers reprinted here is not less sufficient to oblige him to adopt the broadest of titles.

As a device for grouping his papers he has adopted a scheme which locally reflects the chronological academic role's progress. The first eight papers are presented under the general heading "Themes", and the remainder as "Topics". Broadly, the former means analytical or interpretative papers, and the latter research papers. The latter were written during the 1950s and 1960s, while the former were written in the 1970s. Most of the latter were originally published in the learned journals; most of the former were presented as conference papers or contributions to symposia.

Students of English eighteenth-century economic history will find several old friends in the second section. The 1957 study of Joseph Massie's 1759 estimates of national product has long been standard reading for those interested in the quantitative approach, while there are few general writers on the Industrial Revolution who do not draw to greater or lesser extent on Professor Mathias's work on

the economic history of the brewing industry up to 1830. Three such papers in this section illustrate the paper on token coinage, which originally appeared as the introduction to a not very widely circulated book on English trade tokens of 1962.

Of the remaining papers in this section, two of great interest: the first on the role of the medical services of the armed forces in the evolution of public health practice in the eighteenth century; opens up an important line of inquiry, while the second, describing Dr Samuel Johnson's association with, and competition of, the business world—a fascinating offshoot of Professor Mathias's study of the brewing industry—may surprise, but will surely delight, many readers.

The more general analytical papers, the first three of the book make more difficult reading. Technology and capital form the main focus. Three papers on the background to the technological developments of the eighteenth century and their diffusion—the links between invention and innovation—necessarily involve some repetition both of ideas and illustrations, but, because of their

M. W. Flinn was until recently professor of social history at Durham University.

## HISTORY TEACHING IN SCHOOLS

Geoffrey Partington

This study focuses on the purpose of history teaching in schools now that the traditional, research-history as heritage, as moral instruction, and as an instrument for understanding the present have been increasingly brought into question. It goes on to suggest ways of translating historical understanding into classroom practice, investigating the use of recent innovative teaching materials, as well as more traditional methods.

## THE UNEXPECTED REVOLUTION

Margaret E. Bryant. *Foreword by Lord Briggs of Liverpool*  
A readable and well-documented study of the significance and revolutionary character of changes in the education of women and girls in the nineteenth century. Miss Bryant argues that historians, in generally neglecting the significance of such changes, failed to prepare the western world for the Women's Liberation Movement which burst upon it in the last decades of the century. *Studies in Education Series* No. 10. Distributed on behalf of the University of London Institute of Education.

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## BOOKS

## Basel and the church

*Council and Commune: the conciliar movement and the fifteenth-century heretic*  
by Antony Black  
Burns & Oates, £11.95  
ISBN 0 86012 077 5

The Council of Basel was unprecedented. For nearly 20 years, from 1431 to 1449, it remained in being, the longest-running and last of the general councils of the medieval church. With its failure, as Dr Black says in his new authoritative book, went the last chance of reforming the church from within. Long before the Council of Basel finally disbanded it had become the source of renewed schism, eliciting its own pope in 1440; and by the end it was an unrepresentative group, viewed from outside, as something absurd and its later activities, as it continued solemnly to debate great religious issues and to promulgate decrees which went largely unheeded, rather like an ecclesiastical body in an empty auditorium.

There was, however, more to Basel than that, as Dr Black shows. It was the one genuine attempt at a representative alternative to the hierarchical church in the Middle Ages. It allowed almost any cleric to become incorporated and participate in its proceedings; it gave freedom of speech; and it evolved a unique system of committees which was a forerunner of the modern council. It was the nearest thing to the Middle Ages to a self-governing association of the church itself; and it failed

because it could not carry enough of the hierarchy with it.

Not surprisingly Basel became the radical voice of the church, with the lower clergy increasingly predominant from 1437 after the defection of the influential minority of higher ecclesiastics to the Pope; together with the university representatives, important from the beginning, they constituted over half the council, a proportion that continued to rise in its last decade.

Dr Black gives an account and analysis of the council itself; but the greater part of his book is an examination of the political ideas which issued from Basel. At the merely utilitarian level of making accessible the thought of the leading conciliarists of the mid-fifteenth century it is to be welcomed. Secondly, his main subject, Van de Velde, Eschuer, John of Ragusa, Panormitanus are among the most neglected figures of the later Middle Ages. At Dr Black's hands they become both intelligible and distinctive as the expositors of a coherent doctrine of conciliar authority which, although not immediately influential, contained the elements of both the later theory of contract and popular sovereignty.

Based on research on the earlier conception of the church as a corporation they sought to justify the primacy of the church as a body over individual members. That led them to an increasingly hollow or collectivistic view of the church which understandably—but surprisingly in view of their presumed long-standing association—was the antithesis of nominalism, and in Ven de Valde's case was directly inspired by a neoplatonic realism.

They distinguished between the church taken collectively, as in a council, and distributively among its separate elements to argue that the first was prior to the second and could do what a single man, the Pope included, could do. At the same time drawing on contemporary experience of actual corporations, such as guilds, universities, religious confraternities and the political self-governing communes to be found in Spain and among the cities of Italy and Germany, they arrived at an idealized theory of representative government where full and inalienable sovereignty was vested in the whole community, while its officers and executives merely exercised a delegated authority, which could be revoked and overridden, as that of the Pope could be.

The great lesson which Dr Black sees in the conciliarists' conception of corporate representative sovereignty, was the failure, except by Nicolaus of Cusa, to relate it to an adequate theory of representation by election. The conciliarists took the council itself as the expression of the community; an expression perhaps of their own isolation from the wider church and community.

The full intricacies of Dr Black's illuminating exposition cannot be conveyed in a review. They will well repay reading of first hand as a genuine and important contribution to the history of political theory.

Gordon Leff

Gordon Leff is professor of history at the University of York.

## Victorian cholera epidemic

*The Return of the Plague: British society and the cholera 1831-32*  
by Michael Durey  
Gill & Macmillan, £15.00  
ISBN 0 391 01038 7

It might be thought that cholera in nineteenth-century Britain had received sufficient attention during the past year or so to make further study superfluous, but Michael Durey's stimulating book provides many new insights and provides a number of commonly held assumptions. Although based on a thesis it brings few new insights, being written in a light and lucid style.

Durey has taken the example of the threat and outbreak of cholera to examine not just its spread and its impact but also its wider implications for British society.

This is a monograph of social, economic and political change in 1831, cholera infected the most disturbing element for its treatment received attitudes and mentalities, the book's response to the epidemic, its weaknesses and shortcomings, structural, political, social and moral. Cholera

accordingly offers a unique opportunity to study contextually a society under struggling to comprehend and control a new factor in the environment.

How did British society cope with an outbreak of epidemic disease, the like of which had not been seen since the days of the plague? The book is presented as a political idea which initially could only offer traditional containment measures, but which later was to show considerable flexibility in handling the various stresses and pressures at work. It is admitted, though, that the local boards of health were largely ineffective, both because of the lack of suitable treatment and the opposition of industrialists and merchants to restrictions on trade.

Considerable statistical evidence is given to support the argument that rural communities suffered more than urban populations and that mortality rates were not consistent in areas with similar populations. This is seen as the dominant factor in the condition of the local water supplies. No also examines and documents the problems facing the medical profession in understanding and in combating the disease. Here were

opportunities for a successful doctor to raise his status, but Durey notes working-class antagonism towards the profession based on fear of "body-snatching" that could act as a deterrent to experiments. (He also shows that for the working class and for its leaders cholera was a symbol of resistance, either a political or a religious, helping to further their campaign for electoral reform.) Durey concludes that the medical profession, in trying to reconcile the various theories about the nature of cholera, rejected anti-contagionist thought and adopted an explanation based on contingent contagionism.

This is a fascinating study which deserves a wide audience ranging from social historians to those involved in medical education. It illustrates the growing opportunities for re-examination of familiar events in medicine and reassessment of their impact both on medicine itself and society in general.

John Woodward

John Woodward lectures in economic and social history at Sheffield University.

## Origins of social reform

*Before the Welfare State: social administration in early industrial Britain*  
by R. Q. Henriques  
Longman, £8.50 and £4.50  
ISBN 0 582 48594 and 48595 9

Dr Henriques has successfully integrated his own research with the latest general analysis of the development of British social administration, concentrating on reforms in the Poor Law, factory, public health, prisons and elementary education.

The well-documented chapters on present reform constitute the least interesting of these subjects and will be read with the greatest interest. Dr Henriques describes the "reformed" Poor Law, the "reformed" prisons, the "reformed" factory, the "reformed" public health, the "reformed" elementary education, the "reformed" Poor Law, the "reformed" public health, the "reformed" elementary education, the "reformed" Poor Law, the "reformed" public health, the "reformed" elementary education.

arian wages system (in which prisoners' conformity or progress was indicated through a system of rewards and punishments).

Her authoritative and well-balanced account of the Poor Law paints a sombre picture of the old Poor Law and emphasizes the continuities with the reformed system of relief after 1834. The main interest in an otherwise somewhat traditional description of elements of the Poor Law system is in the accounts of the evolution of factory and pauper schooling, and secondly in her emphasis on the role of Kay-Shuttleworth in educational developments. It is Edwin Chadwick, however, who is seen as the dominant reforming influence in the period although his influence is probably overstated in relation to other individuals such as Bentham. Nevertheless, Dr Henriques's researches on the Chadwick papers have brought valuable insights into the discontinuities apparent in his thinking, and into his influence.

It is in the treatment of these three topics particularly that the book's research approach is justified. We are given a clear outline of chronological developments filled

our by local details. Much of its value resides in the use of illustrations and case studies from unpublished sources.

Dr Henriques demonstrates that geographical diversity meant that central government was never strong enough to enforce the uniformity in whose name they were justified, and that increased central powers were matched by those of local authorities. This placing of social administration within a political context is skillfully done and it is a pity that the economic context did not get the same treatment. For example, it was the process of social reform which had to finance social reforms. Indeed, it is a pity that his concluding comparative analysis of the origins and mechanics of social reform is so brief since it is one of the most instructive sections. This is a well organized, interesting work which will be valuable to all students of social history.

Anne Digby  
Anne Digby is research fellow in York University's Institute of Social and Economic Research.



Garibaldi wounded after the battle of Aspromonte, taken from Andreotti's *Garibaldi: the revolutionary and his men*, published by Blandford at £8.95. Viotti, an authority on military uniforms, has researched widely for the illustrations unit has collected together a large number of contemporary photographs of Garibaldi's armies.

## Patrons and clients

*The Gracchi*  
by David Stockton  
Clarendon Press: Oxford University Press, £9.50 and £4.95  
ISBN 0 19 872104 8 and 872105 6

A study of the tribunes of the Gracchi and Gaius Gracchus which may be recommended to students without previous knowledge of their intellectual world to be welcomed. After a useful foreword on Roman constitutional arrangements and an introduction on the nature of the evidence, Stockton's book first examines the political and the social and then devotes three chapters to the Gracchi, one to the doubtful trace (the period

between mid-133 BC and the latter part of 124) and three to the tribunes of the Gracchi. Appendices review and discuss the *Agro Publico Populi Romani* as it existed in the Gracchan period, the speeches of Gaius Gracchus, with full presentation of the surviving fragments, and the chronology of Gaius's legislation.

The method is cautious and commendable. Stockton rarely strays from the ancient sources, which are given adequate citations, and while not all his reconstructions and suggestions will command universal assent (not in any case, to be expected on matters bodily and tentatively reported) the evidence from which he starts and the routes by which he reaches his conclusions are usually clear. Argument on detail would here be out of place, but one general point I would make is that the treatment of the Gracchi is not as a separate piece with its own justification, and by the time enough papers have been written to add up to a reasonably-sized volume the author's focus of activities has often shifted sufficiently to make coherence difficult.

Later Romans thought otherwise and I doubt that the concept of a "reform" existed in the Roman consciousness. Caution, perhaps, leads Stockton to an understatement of the political dimension. Yet the Gracchi were part of the centre of an aristocratic oligarchy whose whole life and business was with politics and were associated in their plans and actions with leading members of that oligarchy. They operated within a political system founded on the patron-client relationship and the beneficent-official nexus and according to a code of conduct which, as the events of the Spanish Civil War clearly demonstrate, was in process of disintegration.

It is here, perhaps, rather than in the detailed analysis of interests infringed, or precedents flouted, that explanation should be sought for, for example, Tibullus's persistence beyond two seasons (note that Cassius Dio informs us that the plan for 132 was to have only Tibullus in a second tribunate) or Appian's Plutarch in a second tribunate and the almost incredible ferocity of his opponents' reaction. The murder of a once-sacred tribune by a senatorial mob led by the Pontifex Maximus and this was not a mere episode in the rapidly repeated cycle of violence remained unbroken, and 132 saw a consular inauguration into his supporters—suggests that his persecutors were driven by no ordinary corpora.

It is true, as Stockton says, that the tribunes of the Gracchi and Gaius Gracchus mark a great watershed in the history of the Roman Republic, but the actions of the two tribunes, of their supporters and of their opponents were more symptomatic than causative.

D. C. Earl

D. C. Earl is professor of classics at the University of Hull.

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**Technician Education Council** 



## Administration continued

## ADMINISTRATIVE OFFICERS

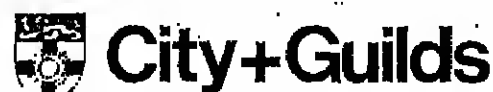
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## Research Officer in AMERICANA

Applications are invited for a 2½ year appointment in connection with the recent foundation of The American Trust for the British Library.

The principal aim of the Trust is to organise and carry out a programme for the acquisition by the Library of American publications, including maps and music, particularly of the late 19th and early 20th centuries. The programme will enhance the resources for American studies already present in the extensive holdings of the Library, and confirm its position as the pre-eminent collection of American materials outside the United States.

The task of the Research Officer will be to make a detailed survey of the Library's holdings of American publications, to make recommendations for their improvement; to prepare for publication a detailed guide to the American collections of the British Library; and as required to help in the acquisition of materials, working in conjunction with the Library's staff.

This post is made possible by a grant from the Leverhulme Trust Fund.

Applicants should have a wide knowledge of the academic field of American Studies. Evidence of post-graduate work in a relevant historical or literary subject will be an advantage. The salary will be within the range of £6,656 to £8,644 according to age and qualifications. Applications should be sent to the Secretary of the Trust, The British Library, Sherton House, Great Chapel Street, London W1V 4BH, not later than 3 March.



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## Courses

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in the functional or notional approach of teaching English. Salary: £8,857-£9,484 per annum free of local taxation.

Benefits: Overseas allowance up to £2,521 per annum; rent-free furnished accommodation with free electricity and water; passage-paid home leave every two years (annually for single or unaccompanied candidates) 2-year contract, renewable. 79 AE 13

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## SINGAPORE



## POLYTECHNIC

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## Union View

### Organization is the best protection

It is important to stress that an association like NATFHE is both a professional association and a trade union. In the past many people have seen it as a professional association being the most relevant to polytechnics and higher education generally. In this connection, NATFHE publications such as its higher education policy statement, its evidence to the Plowden Commission and its relations with such bodies as CNA, DEC and TEC are highly relevant.

In the past NATFHE's trade union role has always seemed to many people, both in higher education management and in NATFHE's membership, as an encumbrance to its standing as a professional association. But times are changing and such attitudes to professionalism will need to change. The positive role of trade unionism needs to be examined and accepted by all elements of higher education, management and staff, and by individual members. The most obvious fact of life in polytechnics and institutions of higher education at the moment is the constant attempt to cut back public expenditure on higher education. A common assumption is that a reduction in this pressure will be met by institutions between management and unions, and at a lower level with local authorities. Such an outcome would not only reduce the ability of public sector higher education to protect itself, it would be in fact, quite disastrous. It is beyond comprehension that management in institutions would wish to run down their college. The local authorities generally have regard to the well being of the service. There is therefore a certain identity of interest between management and unions in higher education. The major problem is to convince the Government and the public as a whole of the

need to preserve the higher education system. What, therefore, can the unions bring to bear on the situation, to the advantage of all in higher education?

The strength of unions such as NATFHE stems from their representation of a coordinated, non-institutional staff view point, combining membership at all academic levels in an institution. The views of such a diversity of membership across all public sector higher education affected by the threatened cuts in expenditure is ascertained through the internal machinery of the union concerned—in NATFHE's case the Polytechnics Advisory Panel and the Higher Education Standing Committee. A clear perspective can be worked out which represents the views of the public sector higher education service as a whole. This is particularly important because the forecasts need to present a strong and prompt the role of higher education as a fundamental part of society, and to stress the particular and special contribution of the public sector.

**nathfe**

As any television viewer knows at the present time, the future of society will be moulded by the silicon chip and the robot car maker. Industry in the future will be more technological and less labour intensive; such is the message of the chairman of British Steel, and British Leyland. Higher education, as part of the general education service, has not important role to play in the new skills and ideas of this new technology. It has an equally valid role in providing for the increased leisure time that many will have in the future. Education for its own sake and for the needs of society are the two sides of the same coin, and not matters to be prioritized.

There is an urgent need, therefore, to increase rather than reduce the proportion of those entering higher education. In certain parts of the country, particularly the five northern counties of England, there is an especial need to maintain and

expand provision, in view of the high and increasing levels of unemployment among all age groups and the pitifully low take-up rate for post-school education.

The protection of higher education demands the urgent creation of the National Body as recommended by the Oakes Committee. This was one of the fundamentally new ideas in public sector higher education agreed by all the interests involved—local authorities, institutional management and NATFHE. It is needed not only to protect higher education resources and to oversee their distribution but to protect the level and quality of the provision offered with which the Association is equally concerned.

Current attempts to reduce higher education provision through the "capping" of the advanced further education pool and the implementation of this cutback through short-term expedient means indicate more and more that we need a strong and independent trade union voice.

A trade union, through the expertise of its permanent secretariat, with their contacts in the world of Government, both local and national, and bodies such as the TUC, has an obviously central function in protecting the idea of higher education, both from the depredations of politicians and the spathy of the public.

Through its links with other individual unions, such as AUT, the Association can ensure a strengthened voice on behalf of higher education and within the TUC can play a part in the protection of the public service as a whole. In the current situation institutions individually are more likely to survive if management and those whom they manage proceed in the same direction. Properly handled the management in a college can be a source of cohesion and strength.

Higher education has a fundamental need of trade unionism; let us hope that those who in the past have been sceptical of such a need will in future join us in the protection of the service.

Ray Grace

The author is chairman of the NATFHE polytechnic advisory panel.

## Grants, course and elusive guidelines



Christopher Price

If I now go on to express some opinions about this subject, they are mine alone and not those of the committee. The situation seems to be this: "level funding" worries the universities because of the uncertainties it generates, not just over overseas students but also a host of other things. Jobs—whole departments—stand at risk. But "level funding" worries the DES because it seems to preclude the innovation and course flexibility our industry and commerce so desperately need. Is it possible both to reassure the universities and provide the DES with the interventionary institutions it is asking for, at one and the same time?

So far it seems unlikely. For many, the last folk they would trust with policy decisions about the structure of higher education are the "national needs" or the "functionalities of the Department of Education and Science. They prefer the devil they know, the UGC on the one side and the local authorities—perhaps later some reincarnated Oakes Committee—on the other. But even if the UGC was the right sort of agency to intervene, there is little that in recent years its interventions have made any significant difference to the pattern of university courses. They used to.

The massive capital grants of the 1960s certainly fixed the shape of much of what now goes on in universities for the foreseeable future. But since that money dried up, the UGC seems to do little more than dither, a disheartening cake. A computer might do it just as effectively. When we asked for examples of their interventionist powers, they returned the "Rational exercise"—14 years of slow rationalization—hardly the flexible impact on the system that Mr Collis is looking for. I suspect the minimal powers of the UGC to innovate would be no greater in a reincarnated Oakes on the other side of the binary line. It would be another representative institutional body, expert at cutting cakes into traditional shapes, but quite unable to generate new ones. (Shapes, not cakes, that is.)

So the dilemma is between a bureaucratic Department of Education that is slow to intervene, but without the trust of the academic world if it ever tried to do so directly; and a trusted, representative

quang on either side of the binary line, which, just because it is so trusted and representative, is impotent to intervene with any effect. Finding a way of settling guidelines which will be adhered to, will be an elusive task.

Equally so will be the machinery for implementation. Hitherto, it seems to have been assumed that this will be through intervention from above, via the UGC in the university sector and the Inspectorate and regional advisory councils in the public sector. I suspect, however, that any such intervention will be quite ineffective unless it is accompanied by a change in the pattern of mandatory grants. As long as first degree courses more or less monopolize grants, their pattern will continue broadly unchanged: if a complete change of emphasis took place, in which priority was given to funding particular post experience and research students in just those areas where there is a national need for better trained manpower, I believe that the flexibility of the system to adapt would astonish everyone.

Further education has always been based on this immediate flexibility to demand and both universities and polytechnics can learn a lot from it. If the corollary of a new pattern of grants were available, the students would come forward, just as trade used to follow the flag; and, I suspect, would follow the students. Redeployment into less traditional forms of higher (and often further) education could be made in follow organically and naturally.

We can do little more than point the way: it is for the Government to act. But we are conscious of the urgency. If the present squeeze on local government finance continues, discretionary grants could almost fade from the scene, with even greater concentration of resources into traditional first degree courses. This, I suspect, is the last thing the Government wants or the country needs. If the pattern of grants does not change, the pattern of courses will not either, and there will be a real danger that our universities could, little by little, decline into that irrelevant artificial enclaves which made Gibber's Oxford years so unprofitable in the hands of the monks of Magdalen 200 years ago.

## Don's diary

"On holiday again?" is the usual question from my burier when I roll in mid-morning. "What do you do in the holidays?" is the invariable second question. The reply is stentorianly awaited not only by Sweeney, but by a quartet of bus-drivers. "Well," I flounder feebly, "the teaching term has finished, but there's a awful lot of reading to do, and administrative work, getting exams ready, preparing future lectures, doing your own research..." I don't need to look at faces which, by now, will be wearing expressions of profound disbelief.

Yet it's only a couple of months from the annual protest of my body against the inordinate pressures of mental work. How right Muo and the women's movement were to emphasize the psychic costs of our present division of labour, and for the underprivileged but also for the more powerful and prestigious. Whether it's due to increasing age, or increasing work or both, I don't know, but I do know that it began with a visit to my GP a few years back. "Doctor, doctor," I said, "it's my stomach and I'm not sleeping well." A few well-chosen questions, and an instant verdict: "Stress." "What, me?" I replied modestly. "I'm made of iron and I've always done most of the teaching and administration about the average hour." "Precisely," he said, and handed me a Valium prescription. A year later, I'd repressed the incident, but he hadn't: "You're late," he said. "Yes, you were here on November 8 last year."

Mid-November: six weeks after the onset of the year; new courses, new students, and, above all, new mounds of paper. Despite the wholehearted cooperation of colleagues, large chunks of administration can't be hived off: co-ordinating, representing and reconciling problems require professorial attention. And much is *ad personam*, too. Not being dead this year is a relief; being dead was to be expected to illiteracy and frustration. But ploughing through mounds of letters and committee reports, seminars, supervising PhD students, doing exams, writing things like this, do minutiae and eat up the day. Donks, on the other hand, the piles of no-reply letters and unanswered letters inch heavenwards.

The really hectic periods are the beginning and end of the year. By the third term, things have become routine. Then comes the flurry of the year-end, for although teaching and exams are out of the way by late June, every committee in the university clears the decks thereafter. By mid-July, the dust has settled. Then you may take three weeks' holiday, and thereafter there are five or six virginal weeks before the machine slips into gear once more. You'll probably take some of it in mind of a professional conference (you should). So extensive writing means either taking time off teaching altogether or eating into "free" time, i.e. normal family life. One result of that is the doctor's surgery.

By now, colleagues in the polytechnics will be starting. "Try doing research in the handful of hours we're allotted," they're right; one can only guess at the personal and interpersonal cost of the increasing volume of high-level scholarship coming out of the polytechnics and colleges. With more than 30,000 new titles a year in the United Kingdom alone, one can only guess how many are produced, though the financial crisis in publishing will surely take care of that, so will the steady erosion of the staff-student ratio, the contribution of successive governments to the reduction of scholarly activity.

Only bureaucrats could dream up the notion of doing research in odd hours. The rhythms of academic life have other compulsions, whether the micro-rhythms of term and year or the micro-rhythms which refuse to be chopped up into hours. This week I'm lucky:



A Sunday which meant three uninterrupted hours to read half a book, and two hours to finish it (meanwhile another PhD thesis plopped onto the desk, and I dropped this Diary for 24 hours to attend a seminar). Since reading-speed steps up as you go on, I read twice as much in the same period of clock-time as I can with ringing phones and knocks on doors. I don't know whether psychologists have done much work on the psychic consequences of all this switching on and off, and the dead lines—a committee for two hours, letters for an hour, a class, writing a report, and so on—but it can't be good. Little wonder that we're witnessing new "diseases of civilization" for which my doctor's pills are no solution. The Malaysian traditional doctor on television the other night had it better: "Must of my patients," he said, "are suffering from envy, anxiety and disappointment."

But there are great satisfactions, and privileges, too. It was rewarding to see that in Halsey's recent survey that's colleagues put our department in the top four. Maybe this will go some way to making the hee-haws of laughter that the mention of the word "sociology" still evokes from one's more Nene-don'tal colleagues. For myself, I've never believed that sociology was "better" than, say, chemistry, or intrinsically more or less "scientific". The Guardian had it right when it used to ask reviewers only to hooty reviewing books "good or their kind". Some sociologists are lousy of their kind, and there is bad and good physics. But a professor that is in the business of looking analytically at social arrangements from the family or the lab to the international community, worries those who don't like the assumption underlying their behaviour made explicit, let alone criticized. It's much easier for five out of six members of our Sonata to say "We back the vice-chancellor" in objecting to Government cuts, and then to do nothing themselves, individually or collectively, to express or criticize opposition to xenophobic, divisive and regressive policies.

The even more potent student can only challenge this lethargy by resort to unorthodox methods—pennicillins, which are largely available, but do interrupt established routines, and thereby prevent further cure from those to whom order and hierarchy are sacred. The militants then get denounced as "intimidators" and "bambos", but I got labelled a "quidder" for trying to show that overseas students feel personally threatened in a racist society and are also genuinely concerned with the universities' future. But to the conservative they are the barbarians at the gate.

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in or pass the buck swiftly upward, probably thereafter going home for the afternoon with a headache. Some, after a more or less ritual show of resistance, capitulate and go at least halfway to meet the complainant. Others look wryly knowing and ask why they should be more loyalist than the king—more honest than member states—and also give in. Yet others look bitterly



These responses leave two main sources, the social and the temperamental, to be considered. The first is a man, unable to resist, in spite of the fact that no job has could gain in his home country—if his contract were not renewed because he was being an awkward customer—would have been in Paris; or that as compared with Paris his home capital is dull and deprived; or that his wife and children would have to leave France; or, worst of all, that the government has lost all sympathy since he set out and, though they may not yet have put pressure on the director-general for his removal, he knows he would hardly receive a warm welcome back in his home country. In such circumstances the price of moral courage for oil but the saintly is quite simply too high.

The temporalist resistance to making a stand are more complex and not necessarily forms of fear. Even people wealthy in their own right, from democracies, and while in go back home and live comfortably whatever they wish to do. Perspectives and the exciting view of the future is war is an international agency. In part of their yielding response can be a fairly simple form of self-interest. But there is usually more than that in play. Often they have a deep seated suspicion of ever-striving institutions to take a stand on behalf of subjects and the world. The speech would seem to them as much a type of posturing as to do so on behalf of some old religion.

They feel deeply uneasy before any question of principle or of right had not worked closely with people like this before and found them fascinating: highly intelligent, devoted, hard-working, not cynical, they yet bewayward the nervousness of an recluse as an excessive of a high moral principle, they would invoke personal principles, even when quite unprincipled pressure were being put upon them. They were, not corrupt people; but of another dimension, in complex choices seemed hardly to exist for them. Without being intellectual, they without being not at all egotistical.

Towards the end of my own time at Unesco, I came up against the issue so much more lodgish than others, I'd met before, that brought me out of the organization three months before I had intended. It was curious to see, as I gradually made up my mind, how different people reacted to the knowledge that I was having this kind of debate with myself. Some felt, rightly, that I was lucky to have the indi-

gence of being able to think of those lines. Some thought it was a little slight. But I had a very nice and prickliness they'd never quite liked. Some were frankly uncomprehending; obviously people shouldn't ever alter their private plans for other people's sake. Some looked on with understanding and concern.

In my case the elements were both social and temperamental. The social side was easy: I had not a job to go back to, but guessed I'd be able to find one. The temperamental trouble once I did return. The temperamental forces were, of course, latent. What I then found myself displaying was not anything I could recognize as "moral courage." It was rather that, when the pressure was at their most intense and the small of shifting compromise was pressing in the pit, four or five of the subterranean whose love I had nursed the

I may well have sensed still  
necked, if not positively so.  
righteous, to those whose own cir-  
cumstances would not allow them  
any account to make such a re-  
sponse. I came from the world  
of the "poor," had hardly ever  
before been asked to plumb what  
it meant bloody-mindedness as it  
flourished of being pushed around,  
primitive Mashedid nonconformity  
surfacing upon the white shirt  
and tie, particularly without reason-  
ation, though it was a useful ac-  
cessory when the really bad things  
came. Still, untempered, such  
attitude can do too rapid, too ir-  
rational in on itself, mouthless  
yielding to the law at which  
the principle becomes  
turn of self-governance.